

*M B Whitaker*



## Department of Energy

Germantown, MD 20874-1290

February 5, 1996

Dr. George W. Cunningham  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, D.C. 20004

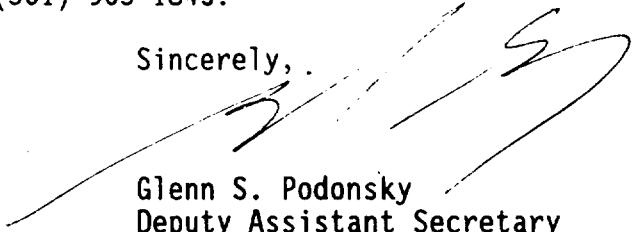
Dear Dr. Cunningham:

In response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-4, the Department of Energy (DOE) prepared and submitted an Implementation Plan requiring initiatives by various DOE Organizations. On January 2, 1996, our office transmitted a supplemental response corrective action plan from the Office of Oversight relating to Recommendation 94-4, Task N.2.5 (Enclosure 1).

Enclosed are the current deliverables required within the Office of Oversight's supplemental corrective action plan. Milestone 3.1, Office of Oversight Standard Procedure EH-24.03.01, Revision 2, "Surveillance Reporting," issued on February 1, 1996. The effective date of implementation is February 19, 1996 (Enclosure 2). Milestone 3.2, "Surveillance of the Y-12 Unreviewed Safety Question Determination Process," was issued on January 29, 1996 (Enclosure 3).

If you have any questions, please contact me at (301) 903-3777 or Frank Russo of my staff at (301) 903-1845.

Sincerely,

  
Glenn S. Podonsky  
Deputy Assistant Secretary  
Office of Oversight  
Environment, Safety and Health

3 Enclosures

cc w/enclosures:  
M. B. Whitaker, S-3.1  
P. Aiken, DP-24





**Department of Energy**  
Germantown, MD 20874-1290

January 2, 1996

1130.1 94-4

Folder 4

Dr. George W. Cunningham  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, D.C. 20004

Dear Dr. Cunningham:

In response to the Recommendation 94-4 of the Defense Nuclear Facilities Safety Board (DNFSB), the Department of Energy (DOE) had prepared and submitted an Implementation Plan requiring initiatives by various DOE organizations. Task N.2.5 of the Implementation Plan required the Office of Environment, Safety and Health (EH) to assess its role in the oversight of criticality safety issues at Oak Ridge's Y-12 Plant. On July 12, 1995, Dr. Tara O'Toole, Assistant Secretary for Environment, Safety and Health, sent EH's response to the Board. The enclosed supplemental response from the Office of Oversight provides a corrective action plan with milestones and due dates for completion of Task N.2.5. My staff has been working with the DNFSB staff in development of this supplemental response. If you have any questions, please contact me on (301) 903-3777 or contact Frank Russo of my staff on (301) 903-1845.

Sincerely,

Glenn S. Podonsky  
Deputy Assistant Secretary  
Office of Oversight  
Environment, Safety and Health

Enclosure

CC:  
M. Whitaker, EH-9



**OFFICE OF ENVIRONMENT, SAFETY AND HEALTH  
SUPPLEMENTAL RESPONSE TO  
DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 94-4**

**INTRODUCTION**

In response to the Recommendation 94-4 of the Defense Nuclear Facilities Safety Board (DNFSB), the Department of Energy (DOE) has prepared and submitted an Implementation Plan requiring initiatives by various DOE organizations. The Implementation Plan required the Office of Environment, Safety and Health (EH) to assess its role in the oversight of Y-12 Plant safety issues. On July 12, 1995, Dr. Tara O'Toole, Assistant Secretary for Environment, Safety and Health sent EH's response to the Board. This supplemental response from the Office of Oversight provides additional information and also satisfies Task N.2.5 requirements for developing a corrective action plan. This response was prepared by review of EH assessment and surveillance reports and interviewing EH Residents assigned at the Oak Ridge Operations Office.

**CHRONOLOGY OF OVERSIGHT ACTIVITIES RELATED TO Y-12 PLANT**

Recommendation 94-4 noted a number of violations of Operational Safety Requirements and other safety limits at the Y-12 Plant. The Board specifically identified deficiencies in the execution of the Y-12 Criticality Safety Program.

The Office of Oversight has reviewed EH oversight activities dating back to 1986 at the Y-12 Plant to determine weaknesses. Findings of EH appraisals in the area of nuclear criticality safety are summarized below:

Technical Safety Appraisal of Buildings 9206 and 9212 of the Y-12 Plant (DOE/EH-0022, September 1986)

Criticality Safety Approvals (CSAs) were overdue for periodic review or re-issue;

Process equipment with non-favorable geometry were identified and recommended for removal or replacement; and

Review process for operating procedures that could impact nuclear criticality safety needed to be revised to incorporate review and approval by the Criticality Safety Department.

Technical Safety Appraisal of Buildings 9206 and 9212 of the Y-12 Plant (DOE/EH-0076, March 1989)

Corrective actions for the three recommendations of the 1986 Technical Safety Appraisal have not been completed (very little progress had been made in correcting out-of-date CSAs and removing non-favorable geometry equipment); and

The Criticality Safety Group had not kept pace with all of its program responsibilities.

Environment Safety and Health Progress Assessment of the Oak Ridge Y-12 Plant (DOE/EH-0256, February 1992)

Upgrading of CSAs and Removal and/or replacement of non-favorable geometry process equipment and upgrading of criticality safety approvals (CSAs) observed in the 1986 and 1989 Technical Safety Appraisals were still open items;

The Nuclear Criticality Safety Department and Operations Surveillance program lacked the requisite formality in conduct and coverage; and The criticality incident reports were not effectively being utilized for lessons-learned and incident prevention due to lack of formal assignment of causal factors and failure to conduct root cause analysis.

These EH appraisals found similar deficiencies in the nuclear criticality safety which were communicated to the line management. However, even though the line management prepared corrective action plans for each of these appraisals, the problems in the criticality safety program identified in 1986 were still uncorrected in 1992.

Additionally, the EH residents at Oak Ridge have conducted surveillance at the Y-12 Plant. A summary of the surveillance documenting the deficiencies in criticality safety, conduct of operations and radiological protection is provided below:

- o Surveillance on March 13, 1994, of the Enhanced Uranium Handling Facility, Building 9212, showed conduct of operations problems. In C-1 wing small safe geometry containers were on floors to catch roof leakage. Also in C-1 wing, an alarm, triggered by high conductivity in the evaporator steam, was neither responded to nor logged. The alarm's purpose is to warn the operators of possible uranium buildup in the steam condensate from the evaporator. Even though the Building 9212 administrative procedure, "Responding to Alarms," requires a written procedure for each alarm panel, there is no procedure for this alarm. The line management was informed of these weaknesses.
- o Surveillance on October 16, 1993, Building 9212 involved review of event reporting adequacy for criticality safety infraction. The report was not prepared in accordance with the DOE Order 5000.3B. It failed to list, as contributing causes, several facility operating training and supervision problems identified during the investigation. As a result of this surveillance, the ten-day report was rejected by the OR Facility Representative.
- o Surveillance on October 26, 1993, involved a review of chemical operator and support personnel in the area of radiological control practices in Building 9212. The surveillance showed that the operator training program did not include recent events, job specific contamination control, and continuing training. Actions had not been initiated to

reduce high surface (transferrable) contamination in C-1 wing. These areas were essentially the same as a year ago when the EH resident toured the areas.

- o Surveillance on August 23, 1993, involved an off-normal event at Building 9998 where three contractor construction workers were contaminated during a baghouse cleaning operation. Operator and contractor management actions to control spill in accordance with the Radcon Manual were incomplete. No contamination surveys had ever been taken where the event had occurred. The procedure to empty the baghouse hopper was still incomplete.
- o Surveillance of August 23, 1993, involved an airborne radioactivity concern in Building 9204-4 which was first reported in January 1993. The surveillance showed several improvements to reduce airborne release of uranium due to grit blasting operations. However, there was no input from the engineering department to fully resolve this problem and the technical problems associated with the equipment had not been reported to DOE in accordance with DOE Order 5000.3B.
- o Surveillance of February 5, 1993, was a limited review of the internal dosimetry at the Y-12 Plant. To better understand the program, a documented positive urinalysis result and resultant dose estimate for an employee was walked through. The contractor had developed and was using a unique "Q" class lung clearance for estimating dose that had not been formally submitted to DOE for approval. This event that resulted in an internal dose of an employee by injection had not been formally reported to DOE.
- o Surveillance of January 22, 1993, involved observing a facility operation in Building 9204-4. The operation involved heat treating and pressing of U-238 6% Niobium metal (called the "binary"). As binary was removed from the heating furnace uranium oxide was permitted to flake off the red-hot ingots and drip on the concrete floor. One of the ingots was dropped and crashed to the floor, dispersing oxide. Floor cleaning left more than a million dpm bet and alpha contamination in the cracks and cervices of the concrete floor. The facility operations log showed at least two recent occurrences had not been reported to DOE. It was learned on a followup that results of air quality samples are routinely delayed eight days to two weeks.
- o Surveillance of December 18, 1992, was a followup on the discovery of a radiological contamination during drilling activities performed by a subcontractor at West Tank Farm at the Y-12 Plant. The surveillance revealed that the exposure of construction-personnel to contamination is due to inadequate site hazard categorization.

The above review demonstrates that the residents had identified and reported deficiencies in criticality safety, conduct of operations and radiological protection program to the Oak Ridge Operations Office, the DOE Y-12 Site Office and the operating contractor. In accordance with EH residents' surveillance procedures then in existence, the contractor and DOE line managements were provided written notification of deficiencies and requested to correct the deficiencies.

We believe that the following weaknesses existed in the EH oversight :

1. The oversight was fragmented. After creation of the Office of Nuclear Safety (NS) in September 1989, the responsibility for nuclear safety oversight was given to NS until its merger with EH in December 1995. EH had nuclear safety oversight prior to September 1989 and then again from December 1994. The oversight for nonnuclear safety has remained in EH since 1986. EH oversight was conducted by different offices for environment, safety, and health. The various oversight activities by EH and NS were not properly coordinated.
2. EH oversight was mainly compliance oriented and did not focus on DOE line management accountability for correcting the identified deficiencies.
3. The surveillances were not conducted on basis of trending or analysis of data generated by previous surveillances and appraisals. The surveillances were primarily conducted in response to an inquiry from the management or reported to the residents by external sources or found in the Occurrence Reporting and Processing System (ORPS). The residents' surveillance findings were not analyzed and rolled up into programmatic or management issues.
4. The EH follow-up on issues identified by these oversight activities was very weak and not well focused.

#### CORRECTIVE ACTION PLAN

1.0 Weakness: EH oversight for ES&H was fragmented and uncoordinated.

Response: The Secretary's October 21, 1994, response to the Board provided a comprehensive exposition of the functions that the Department deemed necessary for an effective nuclear safety management program. An effective independent oversight system was identified as a principle element of that safety management program. This was accomplished by consolidating all independent oversight responsibilities for environment, safety, and health (ES&H) and safeguards and security (S&S) in a newly created Office of Oversight.

Milestone: 1.1 Office of Oversight created on December 17, 1994  
(Action Completed)

2.0 Weakness: EH oversight was compliance oriented and did not hold DOE

line management accountable for failure to correct identified deficiencies.

Response: The primary focus of independent oversight is now on evaluation of DOE line management's accountability in managing safety. The Performance Objectives and Criteria, Inspection Guide, and the EH Residents Surveillance Procedures emphasize the line of inquiry in inspections, reviews, and surveillances must be on DOE line management's performance. Safety management systems are evaluated in accordance with three guiding principles: (a) line managers are responsible for safety; (b) comprehensive requirements exist, are appropriate and executed; (c) competence is commensurate with responsibilities. This approach also verifies how the systems are being implemented at the worker level by assessing selected implementing programs and technical disciplines at selected facilities.

This approach was followed in the recently completed comprehensive ES&H inspections of the Rocky Flats Environmental Management Project, the Idaho National Engineering National Laboratory, and the Savannah River Site.

Milestone: 2.0 Develop and issue EH Resident Surveillance Procedures  
Due Date: June 14, 1995 (Action Completed)  
2.1 Develop and issue Performance Objectives and Criteria  
Due Date: March 31, 1996  
2.2 Develop and issue Inspection Process Guide  
Due Date: May 31, 1996  
2.4 Conduct Inspections, reviews and surveillances using the updated documents specified in 2.0 through 2.4  
Due Date: Ongoing

3.0 Weakness: EH Resident surveillance was not conducted on the basis of careful analysis of performance data.

Response: The Office of Oversight is preparing site profiles for the major DOE sites. The site profiles are prepared by analyzing data obtained from the Office of Oversight inspections, reviews, and special studies; EH resident surveillances; other internal and external reviews; and ORPS data. The profiles describe the key facilities, key ES&H issues, and summary of effectiveness at the sites. The site profiles will be maintained through the performance of periodic inspections, reviews, special studies and surveillance by the EH residents. The site profiles will provide a mechanism for targeting oversight on the basis of carefully analyzed performance data.

Milestone: 3.0 Prepare, validate and distribute site profiles for 11 major DOE sites.  
Due Date: March 31, 1996.


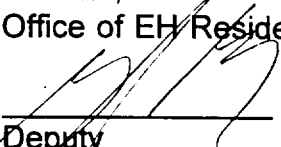
4.0 Weakness: EH followup on identified deficiencies was weak.

Response: EH followup of the identified deficiencies would be conducted by the EH Resident Surveillances. Overdue line management responses will be addressed using EH Resident Procedure Controlling Surveillance Reporting.

Milestone: 3.1 Revise EH Resident Procedure Controlling Surveillance Reporting.  
Due Date: February 1, 1996.

Milestone: 3.2 Evaluate the Y-12 Restart Process by conducting a surveillance of the Unreviewed Safety Question Determination (USQD) Process.  
Due Date: January 31, 1996



<b>U.S. Department of Energy</b>  <b>Office of Oversight</b>  <b>Standard Procedure</b>	<b>Subject: SURVEILLANCE REPORTING</b> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">               Director,              Office of EH Residents           </div> <div style="text-align: center;"> <u>1/31/96</u>              Date           </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">               Deputy              Assistant Secretary           </div> <div style="text-align: center;"> <u>2/1/96</u>              Date           </div> </div>	<b>SP: EH-24.03.01</b> <b>Revision: 2</b> <b>Eff. Date: 02-19-96</b>  <b>Copy No.: _____</b>  <b>Page 1 of 7</b>
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## 1.0 PURPOSE

This procedure provides guidance to Environment, Safety and Health (EH) Residents for reporting results of surveillance activities and the follow-up of issues and concerns identified during surveillance activities. This procedure is intended to ensure that surveillance reports: 1) include all required information, 2) succinctly communicate surveillance results, and 3) clearly focus on the effectiveness of DOE line management and its programs. The follow-up activities will provide sufficient information to determine if further actions are warranted or that sufficient actions have been taken such that issues may be closed.

## 2.0 APPLICABILITY

This procedure applies to Office of EH Residents personnel.

DOE line management is responsible for protecting the health and safety of workers, the public, and the environment. The EH Office of Oversight is responsible for internal independent oversight of DOE line management performance in implementing environment, safety, and health and safeguards and security programs. To carry out this oversight responsibility, Office of EH Residents conducts performance-based surveillances to assess DOE's performance in management of contractor activities. Surveillance activities include: 1) facility walk-through inspections, 2) facility design reviews, 3) documentation reviews, 4) personnel interviews, 5) observation of activities and 6) follow-up activities.

## 3.0 PROCEDURAL REQUIREMENTS

- 3.1 EH Resident surveillances document point-in-time observations of operations, work in progress, facility conditions, and management activities to gather data on program implementation in a topical area. Surveillances generally reflect the information obtained by EH Residents during facility walk-throughs, personnel interviews, documentation reviews, and independent observations.
- 3.2 The Senior EH Resident at each site will coordinate the reporting of surveillances conducted by EH Residents.

- 3.3 To ensure factual accuracy, the EH Resident will conduct an exit briefing with cognizant DOE line management at the close of the surveillance in accordance with the procedure for surveillance of DOE and contractor activities.
- 3.4 The EH Resident will inform the cognizant DOE line manager of any programmatic issues resulting from the surveillance and that the Senior EH Resident will discuss these issues with the senior Operations/Area Office manager.
- 3.5 The EH Resident will document the results of the surveillance in accordance with the Environment, Safety and Health Information System (EHIS) User's Manual.
- 3.5.1 Timeliness, clarity, and succinctness are key to surveillance program success. Surveillance Report Forms should normally be completed and transmitted to the EHIS database within one working day following completion of the surveillance activity. A blank Surveillance Report Form is shown in Appendix A and an example of a completed Surveillance Report is included in Appendix B.
- 3.5.2 Strengths as well as weaknesses in line management performance should be identified in the Surveillance Report. If a particular DOE element is performing its job well, this should be noted.
- 3.5.3 Programmatic issues, concerns, observations, and strengths identified during the surveillance process will be documented.
- It is not the responsibility of the EH Resident to precisely identify the underlying causes; it is a DOE line management responsibility to analyze items identified by EH Residents.
  - DOE line management is responsible for determining root causes, planning corrective actions, verifying the effective implementation of corrective actions, and validating that corrective actions, in fact, corrected the identified deficiency.
  - Surveillance reports should clearly state in Section 2. Discussion/Background/Observations whether line management previously knew of the deficiency identified by the EH Resident.
- 3.5.4 If programmatic issues related to DOE's performance are identified during or following the surveillance process, an analysis must be conducted. The procedure for analyzing DOE's performance is as follows:

- Conclusions reached as a result of EH Resident surveillances include an analysis of whether environment, safety, and health and, safeguards and security programs are adequate, and are being carried out with sufficient accountability, commitment, and technical understanding.
- Development of an analysis of DOE's performance is probably the most difficult task in the reporting process. The analysis involves an EH Resident's evaluation of the data collected (i.e., concerns, observations, strengths, etc.) to make a determination of DOE's performance in discharging its line management and oversight responsibilities.
- In developing an analysis for discussion during an exit briefing with DOE management, and for inclusion in the Conclusion/Safety Significance section of the Surveillance Report Form, it is not sufficient to say that ten contamination control performance concerns were documented during a walk-through of the XYZ Building. Rather, the EH Resident must evaluate these concerns in the aggregate, and relate those concerns to actual DOE line management performance. For example, the EH Resident's analysis may determine that the program deficiencies exist due to a lack of DOE health physics program guidance to the contractor. Therefore, the programmatic issue would be that "DOE has not provided sufficient health physics program guidance to the contractor to enable effective implementation of the program." This programmatic issue would then be supported by one or more concerns or observations.

The EH Resident's analysis may determine that adequate program guidance is in place, and had the guidance been properly implemented, the program deficiencies would not have existed. Therefore, the programmatic issue in this case would be that "DOE has not provided effective management of the contractor's health physics program to ensure compliance with the site's radiation protection program requirements for contamination control." This programmatic issue would then be supported by one or more concerns or observations.

- 3.5.5 By documenting the results of this analysis in Section 3. Conclusion/Safety Significance, of the Surveillance Report, the focus is placed upon associating workplace deficiencies with underlying root causes and correlating programmatic performance issues with an evaluation of DOE's line management performance.
- 3.5.6 The EH Resident will submit Surveillance Reports to the Senior EH Resident for review and approval prior to final release and upload into EHIS. The surveillance should reflect programmatic performance issues and not merely a compliance inspection of contractor activities.

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- 3.6 On a weekly basis, the Senior EH Resident will formally transmit, via memorandum, Surveillance Reports reflecting issues, concerns, observations, and strengths to the senior Operations/Area Office manager, with a copy to the EH Regional Manager and the Operations Technical Advisor. The Senior EH Resident will assure that the Director, Office of EH Residents and the Regional Manager is aware of the significant issues and concerns prior to transmitting the memorandum to the senior DOE line manager.

A sample transmittal memorandum is included as Appendix C. The transmittal memorandum shall include a brief synopsis of the programmatic issues identified in the Surveillance Reports, expectation for DOE line management review and response, and procedures to be followed if an issue is contested. Otherwise, the information contained in the memorandum may be tailored to meet the needs of the site.

- 3.7 The Senior EH Resident will meet weekly (or on a mutually agreeable schedule) with senior Operations/Area Office management to discuss surveillance highlights, follow-up of open surveillance report issues, and items of mutual interest.
- 3.8 The EH Resident will conduct follow-up of open Surveillance Report Issues as follows:
- 3.8.1 The EH Resident will enter Surveillance Report Issues into the Issue Tracking System (ITS) within EHIS.
- 3.8.2 Within 30 days of the receipt of the Surveillance Report, the DOE line organization is expected to provide the EH Residents Office a written response for each identified Issue. The response should clearly state an evaluation of why the deficiency existed, a description of the actions already taken to mitigate the Issue, and any actions taken to prevent its recurrence. Additionally, if proposed corrective actions extend beyond 30 days, a statement should be provided describing the interim compensatory measures that will be taken, and a schedule for final corrective action implementation, including the date on which completion of all corrective actions is expected.
- 3.8.3 Although no formal response is required for Concerns identified during EH Resident surveillances, it is expected that the DOE line organization will correct the Concerns through their issue management process.
- 3.8.4 The EH Residents may close Concerns and evaluate the line organization's correction of Concerns using the process described in Section 3.9 of this procedure.

- 3.8.5 The DOE line management response and schedule for correction of Surveillance Report Issues shall be entered into Section 4. Organization Evaluation & Response, and Section 5. Corrective Actions, of the Surveillance Report and ITS by the EH Resident.
- 3.8.6 For those DOE Corrective Action Plans which are scheduled to be completed over a period in excess of 120 days, the EH Resident will schedule and perform a follow-up surveillance within 30 days of the completion of a selected corrective action milestone. The results of this surveillance shall be entered in Section 6. Follow-up and Closure, of the applicable Surveillance Report.
- 3.8.7 The EH Resident shall monitor the ITS and notify the Senior EH Resident of any corrective action milestones that are missed.
- 3.8.8 The Senior EH Resident shall bring missed corrective action milestones to the attention of the senior Operations/Area Office manager and the Director, Office of EH Residents in the EH Resident transmittal memorandum (Appendix C).
- 3.8.9 Continued inability to achieve identified milestones shall be brought to the attention of the Director, Office of EH Residents, for additional action as appropriate.
- 3.9 The EH Resident will close Surveillance Report Issues through the following process:
  - 3.9.1 The closure of surveillance report concerns by the EH Resident is not required. However, at the discretion of the EH Resident, surveillance report concerns may be closed using the process for the closure of surveillance report issues.
  - 3.9.2 Upon notification by DOE of the completion of the corrective actions addressing an issue, the EH Resident will verify the correction of the Surveillance Report Issue. The verification process will depend upon the severity and complexity of the Issue and may include facility walk-throughs, a surveillance, or discussions with the parties completing the corrective actions.
  - 3.9.3 When the determination has been made via the verification process that the Issue has been satisfactorily addressed, the EH Resident will then complete Section 6. Follow-up and Closure, of the applicable Surveillance Report and enter the appropriate data in EHIS and ITS.
  - 3.9.4 If the determination made via the verification process is that the issue has not been satisfactorily addressed, then the issue will be raised anew with the senior Operations/Area Office manager by the Senior EH Resident.

3.9.5 If the Surveillance Report Issue closure is disputed, refer to the Office of EH Residents Procedure for Resolution of Contested Safety Issues for additional guidance.

#### **4.0 ROLES AND RESPONSIBILITIES**

4.1 ***Director of the Office of EH Residents*** shall be responsible for the following functions:

- Seek resolution with line management in those cases where a pattern of missed corrective action milestones is apparent.
- Biweekly, provide the Director of the Office of Oversight Planning and Analysis a copy of all surveillance reports.

4.2 ***Director of the Office of Oversight Planning and Analysis*** shall be responsible for the following functions:

- Provide a biweekly report to the Director of S-3.1 identifying the surveillance reports given to field representatives of the DNFSB during the period.

4.3 ***Regional Managers*** shall be responsible for the following functions:

- Monitor the completion of corrective actions and closure of Surveillance Reports. Notify the Director, Office of EH Residents, of any continued inability on the part of line management to meet scheduled milestones.
- Ensure consistency of surveillance reporting within the assigned region.

4.4 ***Senior EH Residents*** shall be responsible for the following functions:

- Coordinate the reporting of surveillance activities at the assigned site.
- Review and approve all surveillance reports prior to their issuance.
- Weekly, formally transmit to the Senior Operations/Area Office manager, via memorandum, the Surveillance Reports reflecting concerns, issues, observations and strengths. Provide the cognizant Regional Manager and Operations Technical Advisor with copies of the Surveillance Reports.

- Periodically meet with Senior Operations/Area Office management to discuss surveillance activities and other items of mutual interest.
- Assure that the Director, Office of EH Residents and the Regional Manager are informed of significant issues prior to formal notification of the senior DOE line manager.

**4.5 *EH Residents*** shall be responsible for the following functions:

- Document the surveillance results in EHIS and submit the Surveillance Report Forms to the Senior EH Resident for review and approval.
- Conduct an exit briefing at the close of a surveillance and inform cognizant line management of any programmatic issues identified.
- Maintain ITS and Surveillance Reports current regarding DOE line management's response to Issues and Concerns. Notify the Senior EH Resident of any missed milestones.
- Follow corrective actions and close surveillance reports .

**4.6 *Operations Technical Advisors*** shall be responsible for the following functions:

- Review Surveillance Reports to ensure consistency of reporting and to detect trends across the DOE complex.

**5.0 REFERENCES**

- 5.1 DOE Order 5480.17, "Site Safety Representatives"
- 5.2 EH Residents procedure - "Surveillance of DOE and Contractor Activities"
- 5.3 EH Residents procedure - "Appraisal Scheduling"
- 5.4 EH Residents procedure - "Resolution of Immediate Safety Issues"
- 5.5 EH Residents procedure - "Resolution of Contested Safety Issues"
- 5.6 Environment, Safety and Health Information System (EHIS) User's Manual
- 5.7 Additional Lexicon for EH Resident

Facility/Project:	Profile Area:	Performance Objective:	
Responsible Individual:	POC No.:	Tracking Number:	Date:

**PART A**

**1. Classification/Identification** (Indicate below the classification, and provide a concise statement of the Issue, Concern, Observation, or Strength.)

a) Classification: ☐ Issue ☐ Concern\* ☐ Observation\* ☐ Strength\*  
(\*Formal response not required.)

b) Identification: (Statement of Issue/Concern/Observation/Strength)

**2. Discussion/Background/Observations**

a) Description of Activity and Observed Conditions: \_\_\_\_\_ Date of Activity: \_\_\_\_\_

b) Conclusion/Safety Significance: \_\_\_\_\_

**3. Basis:**

a) Basis: Standards/Regulations/Orders/Guidelines/Supporting Information: \_\_\_\_\_

b) Facility/Project Personnel Contacted or Interviewed: \_\_\_\_\_

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_



Facility/Project:	Profile Area:	Performance Objective:	
Responsible Individual:	POC No.:	Tracking Number:	Date:

**PART B**

**4. Organization Evaluation & Response**

**5. Corrective Actions**

a) Description of Corrective Actions, and Milestones:

**6. Follow-up and Closure**

a) Follow-up status and Closure Justification:

RESOLVED

OPEN

CLOSED

Closure Verified By: \_\_\_\_\_

Date: \_\_\_\_\_

**Sample Surveillance Report**

**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> INEL Site	<b>Profile Area:</b> Quality Assurance	<b>Performance Objective:</b> Comprehensive Requirements	
<b>Responsible Individual:</b> EH Resident	<b>POC No.:</b> 2.8.2	<b>Tracking Number:</b> INEL-DOE-96-001	<b>Date:</b> 27 January 1996

**PART A**

**1. Classification/Identification** (Indicate below the classification, and provide a concise statement of the Issue, Concern, Observation, or Strength.)

a) Classification: ☐ Issue ☒ Concern\* ☐ Observation\* ☐ Strength\*  
(\*Formal response not required.)

b) Identification: (Statement of Issue/Concern/Observation/Strength)

DOE-ID and LMIT Line Management have mechanisms in place to control the purchase, receipt and use of materials to preclude the introduction of counterfeit/suspect parts at the INEL. The lack of management self-assessments to ensure that the process for preventing introduction of Counterfeit/Suspect Parts is working is of concern.

**2. Discussion/Background/Observations**

a) Description of Activity and Observed Conditions: \_\_\_\_\_ Date of Activity: 18 January 1996

The EH Resident, Idaho conducted a surveillance of the Counterfeit/Suspect Parts (C/SP) Program at the Idaho National Engineering Laboratory (INEL). The surveillance was performed following the Guiding Principles as outlined in the EH *Performance Objectives and Criteria* (POC) Manual. The surveillance also contains specific elements (*italicized*) requested by the Director of the Office of EH Residents, dated December 18, 1995. The observed conditions are listed below:

**2.8.2.4 Compliance Assessment Programs**

Criteria: 2.8.2.4a *Planned and periodic internal assessments by line organizations are conducted to measure quality and process effectiveness.*

Neither DOE-ID or LMIT have performed an assessment to ensure that the C/SP program as implemented effectively precludes introduction of C/SP.

**2.8.2.10 Internal Assessment by Line Organizations**

Criteria 2.8.2.10h *Internal assessments by line organizations are planned, structured, and documented. (10CFR830.120)*

Neither DOE-ID or LMIT have Internal Assessments planned or documented which have evaluated the effectiveness of the INEL C/SP Program.

b) Safety Significance/ Conclusion:

This surveillance did not identify any issues of immediate safety significance. DOE-ID and LMIT Line Management have implemented a program to prevent the introduction of C/SP into operations. However, neither DOE or LMIT Line Management have performed an assessment of the C/SP Program to determine if the processes which have been implemented are effective in preventing the introduction of C/SP into INEL operations.

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_

**Sample Surveillance Report**

**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> INEL Site	<b>Profile Area:</b> Quality Assurance	<b>Performance Objective:</b> Comprehensive Requirements	
<b>Responsible Individual:</b> EH Resident	<b>POC No.:</b> 2.8.2	<b>Tracking Number:</b> INEL-DOE-96-001	<b>Date:</b> 27 January 1996

**3. Basis:**

a) Basis: Standards/Regulations/Orders/Guidelines/Supporting Information:

LMIT documents:

- QA Program Description, Section 3.1.7., Suspect/Counterfeit Materials
- QA Program Requirements Document, Section 7.9., Suspect/Counterfeit Materials
- Management Control Procedure (MCP) 592 Rev 0, Acquisition of Goods & Services.
- MCP 590 Rev 0, Procurement.
- Internal Report on Guidelines for Identifying Suspect/Counterfeit Materials.
- Addition procedures and controls are being development such as the Suspect/Counterfeit Standard Quality Clause for Purchase Orders.

DOE documents:

- DOE Order 5000.3B, Occurrence Reporting
- DOE Order 4330.4B, Maintenance Management Program
- DP memo dated October 27, 1995 directing that all C/SP will be reported on ORPS to prevent misinterpretation of the new DOE Order 232.1 requirements.
- October 1993 Plan for the Suspect/Counterfeit Products Issue in DOE and LMIT response to the plan(DDP-02-94).
- NE memo dated April 28, 1993 for procurement controls to prevent C/SP.
- NE memo dated August 21, 1992 for C/SP.
- PR memo dated July 22, 1992 for Inspector General Report on C/SP.
- QA Advisor to NE memo dated June 22, 1992 for NE-80 QA Assessments of C/SP.
- DOE-ID memo dated June 21, 1991 for guidance on C/SP action plan.
- DP memo dated April 22, 1991 on C/SP.
- DOE-ID memo dated April 19, 1991 for identification of C/SP
- DOE-ID memo dated March 13, 1991 on C/SP.
- NE memo dated March 8, 1991 on C/SP.

b) Facility/Project Personnel Contacted or Interviewed:

Persons Contacted:

D. Doe, DOE-ID C/SP Program Manager  
T. Energy, DOE-ID QA Program Manager  
H. Nuclear, DOE-ID QA  
C. Atomic, DOE-ID TRA Facility Representative  
J. Meson, DOE-ID Oversight  
D. Nucleon, LMIT SME for C/SP  
L. Compton, LMIT QA Manager  
G. Beta, LMIT ES&H TRA Manager  
B. Quality, LMIT QA Inspector

**Sample Surveillance Report**

**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> INEL Site	<b>Profile Area:</b> Quality Assurance	<b>Performance Objective:</b> Comprehensive Requirements	
<b>Responsible Individual:</b> EH Resident	<b>POC No.:</b> 2.8.2	<b>Tracking Number:</b> INEL-DOE-96-001	<b>Date:</b> 27 January 1996

**PART B**

**4. Organization Evaluation & Response**

The DOE-ID and LMIT Line Management Assessment Program failed to plan, schedule or conduct assessments which would review implementation of C/SP requirements. Assessments have been conducted of Quality Assurance Program implementation but not on implementation of C/SP requirements. The direct cause of the failure to implement an assessment program which includes C/SP requirements is personnel oversight. The root cause is attributable to an inadequate implementation of a DOE and Contractor Management Assessment Program to verify Standards and Requirements Identification (S/RID).

**5. Corrective Actions**

a) **Description of Corrective Actions, and Milestones:**

- DOE-ID and LMIT will perform an assessment of the INEL C/SP Program implementation 30MAR96
- A review will be conducted to ensure that the Management Assessment Program (MAP) has effectively validated S/RID implementation at the INEL. 30MAY96

**6. Follow-up and Closure**

a) **Follow-up Status and Closure Justification:**

- A Follow-up Surveillance conducted on June 15, 1996 identified that the two milestones identified in section 5 of this report to address the concern have not been completed. The status of the corrective actions were discussed with the Field Office Manager on June 22, 1996.
- The DOE-ID and LMIT C/SP Assessment was performed on June 30, 1996. The results of the assessment were reviewed by EH-24/Idaho on July 6, 1996. The results of the MAP review completed on July 15 identified several weaknesses in S/RID implementation.

Based on review and evaluation of the corrective actions this concern is considered closed.

RESOLVED

☐

OPEN

☐

CLOSED

☒

Closure Verified By: \_\_\_\_\_

Date: \_\_\_\_\_

## **APPENDIX B**

### **OFFICE OF EH RESIDENTS SURVEILLANCE REPORT FORM INSTRUCTIONS**

**Header: Facility/Project:** This box will contain the name of the facility, project, or program upon which the surveillance was performed. It should be in agreement with the critical facilities/project list developed to support the Site Profile.

**Header: Profile Area:** This box will contain the title of the Topical or Functional Profile Area in which the surveillance was performed as stated in the EH Performance Objectives and Criteria (POC). For example, a surveillance performed for EH POC Management Systems Topical (Functional Area for the POC Implementing Programs section ) Area 2.1 would have the entry *Conduct of Operations*.

**Header: Performance Objective:** This box will contain the truncated title of the Overall Performance Objective (PO), e.g. the title adjacent to the Overall PO No. x.x.x , in which the surveillance was performed as stated in the EH POC. For example, a surveillance performed for EH POC functional area 2.1.2 would have the entry *Comprehensive Requirements* without the remainder of the title "for the Conduct of Operations Program" which is the same as the Profile Area title. For surveillances where multiple POs exist, list the primary PO in this block.

**Header: Responsible Individual:** This block will contain the name of the person conducting the surveillance. For multiple individuals list the lead individual responsible for the surveillance first and others if space in the block permits.

**Header: Performance Objective and Criteria (POC) Identification Number:** This block will contain a unique identification/tracking number that corresponds to the appropriate EH Performance Objectives and Criteria. For multiple POCs, list the primary POC in this block.

**Header: Tracking No.:** This box will contain a unique surveillance tracking number that includes the site name, facility name or number, the year, and the next number in sequence.

**Header: Date:** This box will contain the date the report is approved (issued). The report should be issued within one week of completion.

1. a) **Classification:** An "X" will be placed in the appropriate box as defined in the EH Resident Lexicon. If a report contains multiple classifications, such as a strength and an issue, all boxes which apply will be checked. In general, a Surveillance Report should not contain multiple classifications.
1. b) **Identification:** (Statement of Issue/Concern/Observation/ Strength): This section should include a one or two sentence statement of the issue, concern, observation, and/or strength. This section should be a roll-up of the observations/concerns described in section 2. a). In general a surveillance should be conducted in one POC Topical/Functional area and should be focused such that the Identification statement is a higher level "programmatic" statement based on an overall Performance Objective (PO) not a "laundry list" of findings and should focus on DOE performance but may also include observations of contractor performance. The POC **Criterion** title and appropriate supporting Criteria and their identification number should be listed in section 2.a of the Surveillance Report for assimilation into site profile for trending. See example in Appendix B, Sample Surveillance Report, section 2.a.
2. a) **Description of Activity/Date of Activity:** This section will include a discussion of the activity observed. Background information may also be included in this section if pertinent. Observed conditions which are rolled up to support the identification/classification are also contained in this section as a numbered list or succinct narrative statements. In general the numbered statements should correspond to the POC **Criteria** and their number. See example in Appendix B, Sample Surveillance Report, section 2.a. Enter the date the surveillance activity was performed.
2. b) **Conclusion/Safety Significance:** This section will contain a brief conclusion statement including why the Issue, Concern, or Observation has safety significance. The conclusion should be a roll up that focuses on DOE line management performance.
3. a) **Basis:** This section will contain a listing of the documents which were reviewed and support the classification. This section may reference the section 2. a) criteria

**APPENDIX B**

**OFFICE OF EH RESIDENTS SURVEILLANCE REPORT FORM INSTRUCTIONS**

- 3.b) **Facility/Project Personnel Contacted or Interviewed:** In this section the names and titles of the people contacted during performance of the surveillance will be listed.

**PART B:** PART B of the Surveillance Report is not required for an Observation or Strength. EHIS will provide an option to delete Part B if it is classified as an Observation or Strength.

4. **Organization Evaluation and Response:** This section is where the individual responsible for conducting the surveillance will enter the response from the organization upon whom the surveillance was performed. A formal response is required for only Issues, however information collected during the periodic follow-up of concerns should be entered by the individual responsible for conducting the follow-up surveillance.
5. a) **Description of Corrective Actions, Milestones and Commitment Dates:** This section is where the organization upon which the surveillance was performed will provide the corrective actions to be performed and the schedule upon which these will be performed. A response in this section is only required for Issues.
6. **Follow-up and Closure:** An "X" will be placed in the appropriate box (Open/Resolved/Closed) and the name of the person or organization who verified closure and date of closure will be entered. See definition of closure status in Appendix B, Attachment 1.
6. a) **Follow-up Status and Closure Justification:** Provide a brief statement of Follow-up Status and justification for closure including 1) method of verification (e.g. field inspection, document review) and 2) referenced documents which support closure. Sign for closure when action is verified complete.

**SAMPLE TRANSMITTAL MEMORANDUM**

**United States Government**

**Department of Energy**

# memorandum

**DATE:** January 5, 1996

**REPLY TO**

**ATTN OF:** EH Senior Resident (T.L. Hobbes), EH Resident Office, ( Idaho): 208-526-5688

**SUBJECT:** EH Resident Report of Surveillance(s) for Week Ending January 5, 1996

**TO:** J.M. Wilcynski, Manager  
Idaho Operations Office

During the week, the EH Residents Office, Idaho conducted surveillances to gather data on work evolutions, operations, work in progress, facility conditions, and line management activities in order to evaluate program implementation in selected site profile topical areas. EH Resident surveillance activities included:

<b>TITLE</b>	<b>ORG/FACILITY</b>	<b>CLASSIFICATION</b>	<b>STATUS</b>
Conduct of Management	INEL/DOE-ID	Issue (Concern)	Open (Closed)

The listed Surveillance Report(s) is (are) attached for your review. The Surveillance Report(s) does(do)/does not(do not) require a formal response (but is(are) subject to future review) in accordance with the attached instructions for response to issues identified by EH Residents. Line Management evaluation of and corrective actions regarding this surveillance should be forwarded to my office.

T. L. Hobbes  
Senior EH Resident, Idaho  
Office of EH Residents

Attachment

cc:

O. Lynch, EH-24

W. Anawalt, NW Regional Manager

R. Lasky, OTA

## APPENDIX C

### ATTACHMENT 1

#### **Instructions for Response to Issues Identified by the EH Residents**

##### **Definitions**

- Concern:** A negative performance statement, derived from subjective or objective evidence during appraisal or surveillance activities.
- Issue:** A general statement based upon concerns and observations which establishes a significant deficiency or programmatic breakdown in an area of health or safety performance, the extent of the deficiency or programmatic breakdown, and its specific or generic applicability.
- Strength:** An example of exceptional performance or good practice.
- Observation:** A statement of fact regarding an observed condition or practice.
- Open Issue/Concern:** An issue or concern that exists without resolution or agreement.
- Resolved Issue/Concern:** An issue or concern whose corrective action has been agreed upon but has not yet been corrected or verified.
- Closed Issue/Concern:** An issue or concern whose corrective action has been completed.

##### **DOE Line Organization Response to Identified Issues(Concerns)**

Within 30 days of the receipt of the Surveillance Report Form, the DOE Line organization is expected to provide the EH Resident's Office a written response for each identified Issue. The response should clearly state an evaluation of why the deficiency existed, a description of the actions already taken to mitigate the issue, and any actions taken to prevent its recurrence. Additionally, if the proposed corrective actions extend beyond the 30 days, a statement should be provided describing the compensatory measures that will be taken, and a schedule for final corrective action implementation, including the date by which completion of all corrective actions is expected.

Although no formal response is required for "Concerns" or "Observations" identified during EH Resident surveillances, it is expected that the DOE line organization will correct the concerns or observations through their issue management process. Additional Issues may be developed if Concerns or Observations are not adequately addressed through the corrective action/review process. Additionally, the EH Residents Office may assess the status of identified Concerns or Observations through review of similar topical areas at sites other than where the initial Concern or Observation was identified.

##### **Resolution of Contested Safety Issues**

The EH Residents Office will make every effort to resolve contested safety issues at the lowest possible level. However, in some cases, senior level management involvement may be required to effectively resolve a contested issue or concern.

If the validity or accuracy of a safety issue or concern is questioned by DOE line management, please provide the EH Residents Office with a written response describing the DOE line organization's position on the issue or concern, and the technical basis from which your position was developed. This response should be received in our office no later than 30 days after receipt of the Issue Form. The protocols outlined in EH Resident Procedure, "Resolution of Contested Issues" will be used to attempt to resolve the contested issue or concern.



# memorandum

DATE: 1/29/96

REPLY TO

ATTN OF: EH-24:Cooper, Senior Resident:423-574-3990

SUBJECT: TRANSMITTAL OF EH RESIDENT SURVEILLANCE REPORT  
(ORO-Y12-USQP-ANS-002I)

TO: James C. Hall, Manager, Oak Ridge Operations Office

Between 1/2/96 and 1/18/96, our office conducted a surveillance of Oak Ridge Operations Office's (ORO) management and oversight of the Unreviewed Safety Question (USQ) Program at Y-12. This surveillance, Report No. ORO-Y12-USQP-ANS-002I, identified two issues. Specifically, deficient implementation of the USQ Program at Y-12 to the extent that it prevents DOE from having reasonable assurance that unrecognized USQs do not exist at Y-12 (Issue), and ineffective DOE line management oversight of the USQ process resulting in failure to correct known and long-standing deficiencies in the USQ Program (Issue).

This report also discusses the fact that these issues are exacerbated by the poor quality and large volume of the current safety basis documentation for Y-12 facilities. An EH Resident concern not discussed in this report, but related to our findings, is the fact that the readiness assessments process in use at Y-12 is excluding reviews of the authorization bases for resumption facilities from the readiness assessment process. This decision may be logical since the shutdown did not involve issues associated with Y-12 facilities authorization bases. However, the decision may not adequately account for the fact that many USQ Determinations are being performed, to support and justify resumption activities, against authorization basis documentation which may require substantial revision.

Reviewing authorization basis documentation as part of the resumption process would provide assurance that the USQ Determinations are sound. Bases for Interim Operations (BIO) for Y-12 nuclear facilities are currently being submitted to ORO for review and approval. Completing USQ Determinations against these BIOs, when approved, should eliminate this EH Resident concern. However, if USQ Determinations have been performed as part of a facility restart process, an evaluation of the authorization basis documentation used should be considered during the Readiness Assessment process.

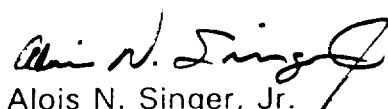
This surveillance was conducted to assess the USQ Process at Y-12, and was used as an indicator to evaluate aspects of the Y-12 Restart Process. The surveillance examined the USQ Process at Y-12, as well as the past assessments/ audits conducted at Y-12 which reviewed elements of the Y-12 USQ Process, and any associated corrective actions performed as a result of these assessments/ audits. Many of the past audits and assessments examined during this surveillance were performed as a result of the Y-12 Restart Process, either as part of an actual

Restart Readiness Assessment or as part of the review of a Special Operations Request Package which had USQ Determinations involved. The fact that many of the past DOE and contractor oversight activities which we assessed were directly related to the Y-12 Restart Process provided the EH Residents with an excellent opportunity to also assess restart activities related to the Y-12 USQ Process.

Based on our surveillance findings, we consider that audits, assessments, and reviews being conducted as part of the Y-12 Restart Process are effectively identifying deficiencies in the programs and processes being examined. These oversight activities are providing the required assurance that Y-12 facilities and processes can be operated safely, before they are allowed to restart. However, there is ample evidence that while specific deficiencies with the USQ process are being effectively identified and corrected, programmatic improvement has not resulted. The fact that restart audits/assessments repeatedly identify the same types of deficiencies with the USQ process, as subsequent facilities and processes are reviewed, is a strong indicator that the corrective actions and lessons learned programs at Y-12 require substantial improvement.

Review of the Y-12 Site Office staff's recent activities indicates management commitment to improve the identification of programmatic weaknesses at Y-12 and to require corrective actions which address programmatic issues vice only the specific deficiencies noted. We appreciate the excellent support provided by the Y-12 Site Office and contractor staffs during our surveillance.

Representatives of the Y-12 Site Office and ORO staff have reviewed the surveillance report for factual accuracy, and their comments have been incorporated or otherwise resolved. Attachment 1 to this memorandum contains instructions for response to the identified issues, and the procedures you should use if you contest the validity or accuracy of the issues. Please feel free to contact me or Joe Carson at 1-2451 or 4-9301, respectively, if you or your staff should have any questions on this matter.



Alois N. Singer, Jr.  
Acting Senior EH Resident, OR

cc:

R. Nelson, DP-80  
R. Spence, DP-81  
M. McBride, M-7  
D. Rhoades, DP-24  
O. Lynch, EH-24  
R. Sigler, EH-24  
D Rohrer, EH-24  
B. Cooper, EH-24  
J. Carson, EH-24  
B. Meigs, EH-24

**Surveillance Report**  
**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> Y-12 Site	<b>Profile Area:</b> 11.4 UNREVIEWED SAFETY QUESTIONS	<b>Subject:</b> UNREVIEWED SAFETY QUESTION PROCESS
<b>Responsible Individuals:</b> Skip Singer/Joe Carson	<b>Identification Number:</b> ORO-Y12-USQP-ANS-002I	<b>Date:</b> 1/02-16/1996
<b>1. Identification/Classification</b> (Indicate below the classification, and provide a concise statement of the Issue, Concern, Observation, or Strength.)		
a) <b>Classification:</b> <div style="display: flex; justify-content: space-around; align-items: flex-start;"><div><input checked="" type="checkbox"/> Issue</div><div><input type="checkbox"/> Concern*</div><div><input checked="" type="checkbox"/> Observation*</div><div><input type="checkbox"/> Strength*</div></div> <div style="text-align: right; font-size: small;">(*Formal response not required.)</div>		
b) <b>Identification:</b> (Statement of Issue/Concern/Observation/Strength)		

**ISSUE 1:** The Unreviewed Safety Question (USQ) Program at Y-12 has significant deficiencies in compliance with DOE Order 5480.21, "Unreviewed Safety Questions." Even though no unidentified USQs were found, these deficiencies prevent DOE from having reasonable assurance that unrecognized USQs do not exist at Y-12.

**ISSUE 2:** DOE line management oversight of the USQ process at Y-12 has not been effective in correcting known and long-standing deficiencies in the contractor's USQ program. DOE has not taken adequate action to correct the contractor's failure to effectively identify the causes of USQ program deficiencies, to implement effective and timely corrective actions, and to identify lessons learned.

DOE oversight activities with regard to the Y-12 USQ program have repeatedly identified programmatic deficiencies during the past 18 months; however, contractor activities in response to these DOE findings have generally been inadequate. DOE did not formally identify a programmatic weakness in the Y-12 USQ Program to LMES until mid 1995, and until recently, DOE failed to identify the contractor responses to correct USQ Program deficiencies as inadequate, and to require appropriate corrective actions for these inadequate responses.

**OBSERVATION:** In a December 1995 review, which has not yet been formally issued, the DOE Y-12 Site Office identified recurring deficiencies with the conduct of USQD's as a programmatic weakness in the USQD process. As a result of this review, DOE Y-12 requested contractor action to address the root cause of this weakness and to prevent its recurrence. Despite substantial prior evidence that this weakness existed, DOE had not previously stressed the need for timely and effective contractor action to improve USQ program performance.

<b>2. Discussion/Background/Observations</b>	
a) <b>Description of Activity and Observed Conditions:</b>	<b>Date of Activity:</b>

The Defense Nuclear Facility Safety Board (DNFSB) issued its Recommendation 94-4 to the Secretary of Energy in September 1994. This recommendation dealt with wide-spread criticality safety deficiencies and an inadequate level of conduct of operations at the Y-12 Site. In the DOE Implementation Plan for Recommendation 94-4 DOE committed that DOE-EH would assess the USQ Program at Y-12. An EH Resident surveillance of the Y-12 USQ Program was performed to meet this commitment.

**Surveillance Report**  
**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> Y-12 Site	<b>Profile Area:</b> 11.4 UNREVIEWED SAFETY QUESTIONS	<b>Subject:</b> UNREVIEWED SAFETY QUESTION PROCESS
<b>Responsible Individuals:</b> Skip Singer/Joe Carson	<b>Identification Number:</b> ORO-Y12-USQP-ANS-002I	<b>Date:</b> 1/02-16/1996

During the period January 2, 1996 through January 16, 1996, the EH Resident's Office - Oak Ridge, conducted a surveillance of DOE/OR's activities in management and oversight of the Y-12 USQ program. The EH Residents interviewed cognizant DOE and contractor personnel and examined USQ process documentation including requirements documents, implementing procedures, completed USQ Screenings and Determinations, Y-12 facilities System Safety Analyses, USQ process audit/assessment reports, root cause analyses and corrective action plans for identified program deficiencies, and other pertinent documentation. The Residents found that an acceptable number of audits and assessments of the Y-12 USQ process had been conducted over the past two years and that a number of significant programmatic deficiencies had been identified by these audits. The Residents also found that many of these deficiencies were recurring in nature and that most still existed.

**Background:** Approval authority for Y-12 Category 2 & 3 Nuclear facilities (there are no Category 1 Nuclear facilities at Y-12) authorization bases was delegated to the Oak Ridge Operations Office (ORO) Assistant Manager for Defense Programs by the Assistant Secretary for Defense Program in a July 1992 letter. The LMES procedure FS-102 (Unreviewed Safety Question Determinations) identifies the flow path that a situation involving a possible USQ would take. The site uses a two-step process which starts with a screening of most facility changes and conditions to determine if a USQD will even be required.

The USQD Screening is required to be performed by those personnel trained and qualified to perform USQDs. Positive screenings result in the need to perform a USQ Determination. The LMES procedure contains steps directing that if a USQD indicates that a positive USQ would result from a proposed facility change, the USQD should be stopped and the change should be modified so that a USQ does not result when the change is actually implemented. If the change cannot be modified to avoid a USQ, The LMES procedure identifies several options, which includes stopping the USQD and performing a System Safety Analysis (SSA) to modify the authorization basis such that the change will not result in the declaration of a USQ.

The following Oak Ridge DOE and contractor assessments/audits/reviews contain the detailed previous findings referenced throughout this report:

- DOE Y-12 Site Office Restart Team Assessment, August 15, 1995
- DOE External Assessment of Special Operation Package, July 7, 1995
- DOE External Assessment of Special Operation Package, April 25, 1995
- DOE external assessment of Special Operation Package, January 5, 1995
- LMES Internal Divisional Adherence Assessment, December 29, 1994

**Surveillance Report**  
**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> Y-12 Site	<b>Profile Area:</b> 11.4 UNREVIEWED SAFETY QUESTIONS	<b>Subject:</b> UNREVIEWED SAFETY QUESTION PROCESS
<b>Responsible Individuals:</b> Skip Singer/Joe Carson	<b>Identification Number:</b> ORO-Y12-USQP-ANS-002I	<b>Date:</b> 1/02-16/1996

- DOE External Assessment of Special Operation Package for International Atomic Energy Agency Inspection, November 15, 1994
- ORO Independent Assessment Review of USQD's for the Y-12 Site (Draft), completed September 2, 1994
- LMES Nuclear Safety Compliance Inspection Report for Building 9204-2E, August 24, 1994
- ORO Assistant Manager for Environment, Safety, and Quality Report, "STATUS OF ORO OVERSIGHT OF UNREVIEWED SAFETY QUESTION PROCESS," December 20, 1993
- Environment, Safety, and Health Appraisal of the Y-12 Site, July 19 - August 6, 1993
- ORO/Y-12 Order Compliance Adherence Assessment, January 12, 1994

**USQ Process Deficiencies**

Most of the audits and assessments conducted during the past two years, which reviewed aspects of the Y-12 USQ process, continue to identify repetitive deficiencies in the USQ process at Y-12. These repetitive deficiencies and other findings of this surveillance indicate a long-standing programmatic weakness in that basic requirements of DOE 5480.21 are not being met. Despite the fact that both contractor and DOE audits have repeatedly identified the failure to follow basic requirements of DOE 5480.21 at Y-12, the existence of a programmatic weakness in the Y-12 USQ process was only recently stressed by the DOE Y-12 Site Office to LMES.

Even though many actions have been taken by LMES to correct identified program deficiencies, no substantive action has been taken by LMES to resolve this programmatic weakness. The existence of this programmatic weakness is significant because it prevents DOE from having reasonable assurance that unrecognized USQ's do not exist at Y-12. The specific deficiencies identified with the Y-12 USQ program by past audits and assessments and/or during this surveillance include:

- Audits and assessments conducted as recently as December 1995 repeatedly identified that USQ Determinations (USQD's) were not properly performed, were not performed when required for changes to facilities or to procedures described in the authorization basis, or were not properly approved (DOE 5480.21 Section 10.e.1).
- These audits and assessments also repeatedly identified that untrained and/or unqualified personnel are continuing to conduct USQD screenings and USQ Determinations (DOE 5480.21 Section 7.c).

**Surveillance Report**  
**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> Y-12 Site	<b>Profile Area:</b> 11.4 UNREVIEWED SAFETY QUESTIONS	<b>Subject:</b> UNREVIEWED SAFETY QUESTION PROCESS
<b>Responsible Individuals:</b> Skip Singer/Joe Carson	<b>Identification Number:</b> ORO-Y12-USQP-ANS-002I	<b>Date:</b> 1/02-16/1996

- Most of the screenings/determinations performed by untrained/unqualified personnel, and several other USQD's identified by these audits, were not adequate (did not contain sufficient documentation and analysis) to support the decision reached by the determination or screening (DOE 5480.21 Chapter III, Section 5).
- One independent assessment conducted the ORO Office of Environment, Safety, and Quality (AMESQ) in mid 1994, identified that, based on the information provided in and the inadequacy of the USQD, a USQ may have existed for the situation covered by this USQD (DOE 5480.21 Chapter III). This audit was never issued beyond the draft form, resulting in the deficiencies not being entered into and tracked in the contractor's corrective action program (ESAMS). During interviews, cognizant DOE personnel indicated that the report should have been issued, but that they simply had not had the time to finalize and issue the report.
- One LMES internal assessment conducted in December 1994 by an LMES Program Manager identified that facility procedures for abnormal situations did not clearly direct personnel to the USQD process, and that the potential effects of post-modification testing were not being evaluated in USQD's (DOE 5480.21 Chapter II). There is no evidence in ESAMS that these finding have been acted on for tracking and correction.

The EH Residents' review validated that most of the repetitive deficiencies discussed above still continue to occur and are identified on current audits and assessments. Our review also identified or confirmed the following recent findings:

- The LMES implementing procedure, FS-102 (UNREVIEWED SAFETY QUESTION DETERMINATION, November 1994), does not contain all of the elements required by DOE Order 5480.21, for example:
  - FS-102 does not define the specific qualifications needed by those who complete USQD's and USQD screenings. It merely states the attributes that should be evaluated to determine qualifications rather than defining a standard to be met (DOE 5480.21 Chapter III, Section 5.a,d).
  - FS-102 does not define the specific documentation requirements for USQD and USQD screening work sheets, nor the specific level of detail required to satisfy the Order requirements (DOE 5480.21 Chapter III, Section 5.a,e).
  - FS-102 does not require that USQD work sheets include a listing of the authorization basis documentation consulted to perform the evaluation, and no space is provided on the sample USQD form to include such a list. The screening form does require such a list

**Surveillance Report**  
**Office of Oversight - Environment, Safety and Health**

<b>Facility/Project:</b> Y-12 Site	<b>Profile Area:</b> 11.4 UNREVIEWED SAFETY QUESTIONS	<b>Subject:</b> UNREVIEWED SAFETY QUESTION PROCESS
<b>Responsible Individuals:</b> Skip Singer/Joe Carson	<b>Identification Number:</b> ORO-Y12-USQP-ANS-002I	<b>Date:</b> 1/02-16/1996

and provides some space for including the list (DOE 5480.21 Chapter III, Section 5.a,e).

- FS-102 does not discuss the governing process nor does Y-12 or LMES have a "governing procedure" as discussed in Chapter III section 2 of the Order. The USQ process is not fully integrated into all technical aspects of operations at Y-12, and all appropriate personnel have not received training in USQ process (DOE 5480.21 Section 7.d and Chapter III, Section 2).
- DOE and LMES have made interpretations in implementing the Order at Y-12 which do not meet the requirements of the Order, or conflict with the substantial implementation guidance issued to support this Order. For example:
  - Y-12's implementation of the process to control "categorical exclusions" to the USQ process does not conform to DOE 5480.21's guidance (DOE 5480.21 Chapter III, Section 4.c). DOE Y-12 Site Office assessments have identified examples where a categorical exclusion was cited as the justification on a screening form, for not performing a USQD. Subsequent DOE followup determined that a one-time determination/justification had not been performed and documented for the categorical exclusion (DOE 5480.21 Chapter III, Section 4.c).
  - Personnel interviews during this surveillance identified that the DOE Y-12 Site Office and the Y-12 contractor have a verbal agreement that the annual report required to be issued to the CSO regarding USQD's would not be issued, since all of the information is contained in a local LMES data base, to which DOE can request access. No annual reports have been issued by Y-12. (DOE 5480.21 Section 10.e.4)
  - EH guidance and/or interpretations have not been requested by the contractor or ORO for instances where proposed Design Change Notices (DCNs) are identified as USQs. Instead, Y-12 has chosen to terminate the USQ process and to modify the safety basis of facilities in several cases so that the proposed DCNs would not be USQs, as discussed previously. This may be inconsistent with the philosophy of USQs and also contrary to DOE 5480.31 requirements for Operational Readiness Reviews for DCNs involving changes to the facility safety basis (DOE 5480.21 Section 9.b.2 and 3). Two examples where this process occurred are:
    - (1) SSA-06, System Safety Analysis for the Building 9212 HEPA Filter System, was issued to change the building authorization basis to allow adding a new set of HEPA filters to the building ventilation system when a USQD found that a USQ would result from the proposed change. The new set of filters created a new

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criticality concern which was not analyzed for in the authorization basis existing at the time of the proposed DCN.

(2) SSA-025 was prepared to change the authorization basis for Building 9204-2E to allow the interim storage of weapons components not described or analyzed for in the authorization basis that existed when the change in storage was proposed.

- Based on findings identified at the beginning of this section (ESAMS ID #I0027981, I0027980, I0026983, I0026699, I0026571, I0025740, I0025739, I0025740 and other ESAMS deficiencies) there is inadequate assurance that personnel conducting the USQD screenings are properly trained and familiar with the authorization bases of the facilities (DOE 5480.21 Section 7.c).
- The Y-12 Site Office has not previously had a formal process to periodically review facility authorization bases nor provide oversight of the USQ process and contractor procedures (DOE 5480.21 Section 9.e.1 and 3). Y-12 is currently implementing a process to upgrade and periodically validate facility authorization basis documentation by the recent submission of new Bases for Interim Operations (BIO) for Y-12 facilities, which will include a requirement for an annual review (and update if required) of these BIOs.
- Y-12 Site Office has reviewed, but not specifically approved the contractor procedures demonstrating compliance with DOE 5480.21. (DOE 5480.21 Sect 9.e.2)

**Ineffective DOE Line Management Oversight**

As discussed earlier, basic deficiencies with the implementation of DOE requirements for a USQ program continue to be identified on both internal and external audits and assessments at Y-12. DOE and contractor management have not adequately addressed these deficiencies through the identification and implementation of effective corrective actions.

The following facts highlight problems with the Y-12 contractor's corrective action program with regard to the USQD program and the lack of effective DOE oversight of this process:

- ESAMS Reports document that root cause analysis has rarely been performed and lessons learned have not been required for USQ process deficiencies that have been identified:
  - Fourteen significant deficiencies involving USQDs are listed in ESAMS, stemming from 7 different audits/assessments conducted of the Y-12 USQ process between August 1994 and November 1995. Of these, four of fourteen have never had corrective actions



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specified or implemented and eleven of fourteen had no root cause analysis performed.

- Each of the 10 deficiencies with corrective actions identified in ESAMS are marked that lessons learned are not warranted.
- A DOE ORO Independent Assessment of the Y-12 USQ process, performed between June 6, 1994 and September 2, 1994 was never formally issued. The deficiencies listed in this draft report have not been acted on by DOE Y-12 or LMES. This draft ORO assessment found the following significant deficiencies:
  - "Based on the review of two USQDs for as-found conditions, Y-12 USQDs for as-found conditions generally have significant discrepancies."
  - "Neither of the USQDs reference above had the safety approvals required by Y70-809 (Y-12 Site USQD Procedure)."
  - "One USQD document was judged as not adequately supporting the conclusion that the as-found condition was not a USQ."
  - "The other USQD required approximately seven months for approval. The final occurrence report indicates that inspection of the equipment to certify it safe for operation was completed before repairs were completed to correct the deficiencies."

In response to concerns raised by the DNFSB at Richland Operations Office, regarding inadequate DOE oversight of the USQ process, A December 20, 1993, ORO report was issued on the status of ORO oversight of the USQ process at Oak Ridge. This ORO report concluded that Y-12 was in compliance with the Order and had addressed all of the DNFSB concerns, which included:

- The Order requirement that heads of field organizations "ensure that adequate contractor procedures are in place and assess the effectiveness of their implementation" is not being met;
- The Order requirement that heads of field organizations "actively monitor the contractor's USQ identification, review, and decision making process" is not being met;
- The Order requirement that the contractor submit a report summarizing all situations for which a safety evaluations is required is not being met.
- No evidence of implementation of DOE Order 5480.21 was supplied by the DOE Operations Office during their compliance self assessment program. DOE compliance was demonstrated by referencing the implementing directive to show compliance.

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- Statements in the ORO December 1993 report such as, "Procedure 70-809 (Unreviewed Safety Questions) has been revised and addresses the DNFSB concerns" and "The Y-12 DOE and contractor programs contain elements which address the concerns identified by the DNFSB staff," and other wording in the report clearly indicate that this review demonstrated DOE compliance by referencing the implementing directives to show compliance. The discussion contained in the report indicates that this review did not include an actual audit/assessment of USQ program activities being performed, but rather reviewed the implementing procedures and requirements to ensure that all DOE Order requirements were captured. This is disturbing since the last DNFSB concern identified at Richland considered this very method unacceptable for showing Order compliance.
- ORO cited two ORO assessments performed earlier in 1993, which did include field verification activities, as the basis for not performing field verification as part of the December 1993 review. EH Resident review of these two assessments, an ORO DOE Order compliance assessment and an ORO multifunctional appraisal which both reviewed the USQ process, identified the following:
  - The order compliance assessment used a "Smart Sample List" for field verification, which only included five of twenty of the Order requirements and one of the Order implementing criteria. The size of this "smart sample" may have been too small to adequately assess compliance with the DOE Order.
  - The multifunctional appraisal report provided contains insufficient details regarding the specific implementing criteria of the Order requirements which were actually reviewed during field verification, to allow a valid EH Resident assessment of the adequacy of the multifunctional appraisal with regard to the USQ Program.
- The eight other DOE and LMES reviews discussed above (which were conducted subsequent to this December 1993 report) and this surveillance identified many examples where Y-12 is not and clearly has not been in compliance with many of the basic requirements of DOE 5480.21, and where DOE and Y-12 have not met some of the above-listed DNFSB concerns. These facts indicate that either the 1993 ORO assessments reached incorrect conclusions, or DOE and LMES have allowed the Y-12 USQ Program to substantially declined since 1993.
- There is little evidence that the Cognizant Secretarial Officer's (CSO's) Headquarters staff actively monitors the USQ identification, review, and decision making process of the DOE Oak Ridge Operations Offices and Y-12 contractor under his cognizance, to determine whether an incident, analysis, or proposed change/ modification involves a USQ (DOE 5480.21 Section 9.a). This is considered significant since

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approval authority has been delegated from the CSO to the ORO Assistant Manager for Defense Programs, removing the CSO from ongoing activities involving the USQ process at Y-12.

**b) Conclusion/Safety Significance:**

DOE line Management's inability to correct programmatic weaknesses in the Y-12 USQ process, resulting from deficiencies in compliance with DOE 5480.21 requirements, prevents DOE from having reasonable assurance that unrecognized USQs do not exist at Y-12.

This situation is exacerbated by the facts that much of the authorization basis documentation on which these determinations are based on are old hazard screenings/analyses, SARs, or other documents which are continuously changing as safety basis documentation is upgraded or revised to reflect changing facility conditions and, that Y-12 is not in full compliance with DOE Order 5480.23 (Nuclear Safety Analysis Reports). When BIOs for Y-12 facilities, currently being submitted to DOE for review, are approved, this aspect of the USQ Program should be improved.

**3. Basis:**

**a) Basis: Standards/Regulations/Orders/Guidelines/Supporting Information:**

DOE 5480.21, Unreviewed Safety Questions  
DOE 5480.23, Nuclear Safety Analysis Reports  
ORIG 5480.21A Unreviewed Safety Questions  
NE-1 memo of 12/29/92, "Interpretation of DOE 5480.21"  
LMES procedure FS-102, "Unreviewed Safety Question Determinations."  
LMES procedure ES/CSET-9, "Unreviewed Safety Question Determination Application Guide"  
Y-12 Procedure (cancelled) Y70-809, "Unreviewed Safety Questions"  
SSA-06, System Safety Analysis for Building 9212 HEPA Filter System  
SSA-025, Interim Storage of Weapons Components in Building 9204-2E  
USQD Screening Worksheets, More than 30 reviewed  
USQD Worksheet, More than twenty-five reviewed  
DOE and contractor Reports listed in Section 2 of this report

**b) Facility/Project Personnel Contacted or Interviewed:**

Dan Hoag, DOE Y-12 Site Office ES&H Branch Chief  
Jorge Ferrer, DOE Y-12 Site Office  
Frank Poppell, DOE Y-12 Site Office (Support Service Contractor)  
Mike Boyd, DOE-ORO Facility Safety Division  
John Harris, DOE-ORO Facility Safety Division  
Steve Wilson, LMES Y-12 Facility Safety Manager  
Bill Heineken, LMES Y-12 Facility Safety  
Bobby Williams, LMES Central Engineering  
Susan Phillips, LMES Central Engineering  
Dan Wilson, LMES Subject Matter Expert, Unreviewed Safety Questions

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**4. Organization Evaluation & Response**

**5. Corrective Actions**

a) Description of Corrective Actions, Milestones and Commitment Dates:

b) Approval: \_\_\_\_\_ Date \_\_\_\_\_

Operations/Area Office Approval

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<b>6. Follow-up and Closure</b>		
a) Closure Justification:		

RESOLVED

OPEN

CLOSED

Closure Verified By: \_\_\_\_\_

Date: \_\_\_\_\_